AMENDMENTS TO THE CLAIMS

Please cancel claims 5-6 without prejudice. Please amend the following claims which are pending in the present application:

1. (Currently amended) A method, comprising:

~~etching a~~ submerging a waveguide having a trapezoidal anisotropic shape in a wet etch solution to etch the waveguide isotropically to smooth a surface of the waveguide; and

applying sonic energy to the wet etch solution while etching the waveguide isotropically to form a waveguide having a substantially rounded surface.

2. (Original) The method of claim 1, wherein the waveguide comprises stoichiometric silicon nitride.

3. (Original) The method of claim 1, wherein the waveguide comprises amorphous silicon.

4. (Original) The method of claim 1, further comprising etching the waveguide anisotropically before etching the waveguide isotropically.

5 - 6. (Cancelled)

7. (Currently amended) The method of claim [[6]] 1, wherein the sonic energy is megasonic.

8. (Original) The method of claim 7, wherein the megasonic energy is in the approximate range of 800 KHz – 1200 KHz.

9. (Currently amended) The method of claim [[6]] 1, wherein the sonic energy is ultrasonic.

10. (Original) The method of claim 9, wherein the ultrasonic energy is in the approximate range of 1 KHz – 50 KHz.

11. (Currently amended) The method of claim [[5]] 1, wherein the wet etch solution comprises an acid compatible with temperatures above approximately 70°C and etches stoichiometric silicon nitride and is selective to dielectric materials.

12. (Original) The method claim 11, wherein the wet etch solution comprises approximately 84% by volume phosphoric acid in water.

13. (Currently amended) The method of claim [[5]] 1, wherein the wet etch solution comprises a base having a pH in the approximate range of 10-13 and etches amorphous silicon and is selective to dielectric materials.

14. (Original) The method of claim 13, wherein the base is a non-metallic base.

15. (Original) The method of claim 1, further comprising performing the isotropic etch at a temperature in the approximate range of 24°C - 70°C.

16. (Original) The method of claim 1, further comprising etching the waveguide for a time sufficient to smooth the surface of the waveguide to maximize retention of a light signal within the waveguide.

17. (Currently amended) A method, comprising:

forming an amorphous silicon layer on a first dielectric layer;

etching the amorphous silicon layer with an anisotropic dry plasma etch to form at least one waveguide having a trapezoidal anisotropic shape;

submerging the at least one waveguide in an ammonia hydroxide isotropic wet etch solution to which sonic energy is being applied at approximately room temperature for a time sufficient to smooth [[the]] a surface of the waveguide to form a waveguide having a substantially rounded surface; and

forming a second dielectric layer above the at least one waveguide.

18. (Original) The method of claim 17, wherein the isotropic etch for amorphous silicon is a wet etch solution comprising ammonium hydroxide in the approximate range of 2% - 10% by volume in water.

19. (Original) The method of claim 17, wherein the sonic energy impacts the waveguide with a power in the approximate range of 0.5 W/cm^2 – 10.0 W/cm^2.

20. (Original) A method, comprising:

maximizing retention of an intensity of a light signal within a waveguide by etching a waveguide isotropically to smooth a surface of the waveguide.

21. (Original) The method of claim 20, wherein the light intensity loss of a substantially smoothed waveguide is approximately 6 dB/cm.

22. (Original) The method of claim 20, wherein the waveguide is amorphous silicon.

23.-30. (Cancelled)